

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Kapeller-Libermann, Rosana, et al.		
Application No.:	09/935,290	Group No.:	1652
Filed:	August 21, 2001	Examiner:	Nashed, N. T.
For:	56919, A NOVEL HUMAN ACYLTRANSFERASE AND USES THEREOF		

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUBMISSION OF "SEQUENCE LISTING," COMPUTER READABLE COPY,
AND/OR AMENDMENT PERTAINING THERETO
FOR BIOTECHNOLOGY INVENTION CONTAINING NUCLEOTIDE
AND/OR AMINO ACID SEQUENCE

1. ☐ This submission accompanies the new application being filed concurrently herewith.
☒ This replies to the Telephone discussion with Examiner Nashed September 20, 2005.

IDENTIFICATION OF PERSON MAKING STATEMENT

2. I, Kerri Pollard Schray
(type or print name of person signing below)

state the following:

ITEMS BEING SUBMITTED

CERTIFICATION UNDER 37 C.F.R. SECTIONS 1.8(a) and 1.10*

I hereby certify that, on the date shown below, this correspondence is being:

DELIVERY

- ☒ delivered BY HAND to the United States Patent and Trademark Office in an envelope addressed to Mail Stop AF, Commissioner for Patents.

37 C.F.R. SECTION 1.8(a)

37 C.F.R. SECTION 1.10*

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TRANSMISSION

- ☐ transmitted by facsimile to the Patent and Trademark Office.

Signature

For C. I. Hendley
Forest C. I. Hendley

Date: September 23, 2005

(type or print name of person certifying)

***WARNING:** Each paper or fee filed by "Express Mail" must have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C.F.R. section 1.10(b). "Since the filing of correspondence under section 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will not be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

ITEMS BEING SUBMITTED

3. Submitted herewith is/are:

- A. ☒ "Sequence Listing(s)" for the nucleotide and/or amino acid sequence(s) in this application. Each sequence in the "Sequence Listing" is assigned a separate identifier as required in 37 C.F.R. Section 1.821(c) and 37 C.F.R. Sections 1.822 and 1.823.
- B. ☐ An amendment to the description and/or claims, wherein reference is made to the sequence by use of the assigned identifier, as required in 37 C.F.R. Section 1.821(d).
- C. ☐ A copy of each "Sequence Listing" submitted for this application in computer readable form, in accordance with the requirements of 37 C.F.R. Sections 1.821(e) and 1.824.
- D. ☐ Please transfer to this application, in accordance with 37 C.F.R. Section 1.821(e), the computer readable copy(ies) from applicant's other application identified as follows:

In re application of:			
Application No.:		Group No.:	
Filed:		Examiner:	
For:			

The Computer readable form(s) of applicant's other application corresponds to the "Sequence Identifier(s)" of the application as follows:

Computer Readable Form	"Sequence Identifier"
(other application)	(this application)

- E. ☒ A statement that the content of each "Sequence Listing" submitted and each computer readable copy are the same, as required in 37 C.F.R. Section 1.821(g).
- ☐ Because the statement is not made by a person registered to practice before the Office, the Statement is verified as required in 37 C.F.R. Section 1.821(b).
- F. ☒ Because this submission is made in fulfilling the requirement under 37 C.F.R. Section 1.821(g), a statement that the submission includes no new matter.
- ☐ Because the statement is not made by a person registered to practice before the Office, the statement is verified, as required in 37 C.F.R. Section 1.821(g).

**STATEMENT THAT "SEQUENCE LISTING"
AND COMPUTER READABLE COPY ARE THE SAME
AND/OR THAT PAPERS SUBMITTED INCLUDES NO NEW MATTER**

4. I hereby state:

- A. ☒ Each computer readable form submitted in this application, including those forms requested to be transferred from applicant's other application, is the same as the "Sequence Listing" to which it is indicated to relate.
- B. ☒ All papers accompanying this submission, or for which a request for transfer from applicants' other application, introduce no new matter.

EXTENSION OF TERM

5. The proceedings herein are for a patent application and the provisions of 37 C.F.R. Section 1.136 apply.

- (a) ☐ Applicant petitions for an extension of time under 37 C.F.R. Section 1.136 (fees: 37 C.F.R. Section 1.17(a)(1)-(4)) for the total number of months checked below:

<u>Extension (months)</u>	<u>Fee for other than small entity</u>	<u>Fee for small entity</u>
<input type="checkbox"/> one month	\$ 120.00	\$ 60.00
<input type="checkbox"/> two months	\$ 450.00	\$ 225.00
<input type="checkbox"/> three months	\$1,020.00	\$ 510.00
<input type="checkbox"/> four months	\$1,590.00	\$ 795.00

Fee \$0.00

If an additional extension of time is required, please consider this a petition therefor.

- ☐ An extension for _____ months has already been secured, and the fee paid therefor of \$0.00 is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request \$0.00

OR

- (b) ☒ Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Practitioner's Docket No. MPI00-343P1RRCEM

FEE PAYMENT

6. ☐ Attached is a check in the sum of \$ _____ .
☐ Charge Account No. 501668 the sum of \$0.00 .
A duplicate of this transmittal is attached.

FEE DEFICIENCY

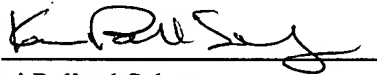
8. ☒ If any additional extension and/or fee is required, charge Account No. 501668 .

9. Correspondence Address
Direct all future correspondence to:

Customer Number 30405
OR
Intellectual Property Department
MILLENNIUM PHARMACEUTICALS, INC.
40 Landsdowne Street
Cambridge, MA 02139

September 23, 2005

MILLENNIUM PHARMACEUTICALS, INC.

By 
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40 Landsdowne Street
Cambridge, MA 02139
Telephone – (617) 551-3676
Facsimile – (617) 551-8820

SEQUENCE LISTING

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Glu	Gln	Gln	Trp	Asp	Lys	Lys	Leu	Pro	Glu	Pro	Leu	Ser	Trp	Arg	Ser
		675					680					685			
Asp	Glu	Glu	Asp	Glu	Asp	Ser	Asp	Phe	Gly	Glu	Glu	Gln	Arg	Asp	Cys
	690					695					700				
Tyr	Leu	Lys	Val	Ser	Gln	Ser	Lys	Glu	His	Gln	Gln	Phe	Ile	Thr	Phe
705					710					715					720
Leu	Gln	Arg	Leu	Leu	Gly	Pro	Leu	Leu	Glu	Ala	Tyr	Ser	Ser	Ala	Ala
			725						730						735
Ile	Phe	Val	His	Asn	Phe	Ser	Gly	Pro	Val	Pro	Glu	Pro	Glu	Tyr	Leu
			740					745					750		
Gln	Lys	Leu	His	Lys	Tyr	Leu	Ile	Thr	Arg	Thr	Glu	Arg	Asn	Val	Ala
		755					760					765			
Val	Tyr	Ala	Glu	Ser	Ala	Thr	Tyr	Cys	Leu	Val	Lys	Asn	Ala	Val	Lys
	770					775					780				
Met	Phe	Lys	Asp	Ile	Gly	Val	Phe	Lys	Glu	Thr	Lys	Gln	Lys	Arg	Val
785					790					795					800
Ser	Val	Leu	Glu	Leu	Ser	Ser	Thr	Phe	Leu	Pro	Gln	Cys	Asn	Arg	Gln
				805					810						815
Lys	Leu	Leu	Glu	Tyr	Ile	Leu	Ser	Phe	Val	Val	Leu				
			820					825							

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 <211> 2484
 <212> DNA
 <213> Homo sapiens

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 cccaccgtct tcagatctgc aactttaaaa tggaaagaaa gcctaattgag tcggaaaagg 180
 ccatttggtg gaagatgttg ttactcctgc actcccaga gctgggacaa atttttcaac 240
 cccagtatcc cgtctttggg tttgcggaat gttatttata tcaatgaaac tcacacaaga 300
 caccgaggat ggcttgcaag acgcctttct tacgttcttt ttattcaaga gcgagatgtg 360
 cataagggca tgtttgccac caatgtgact gaaaatgtgc tgaacagcag tagagtacaa 420
 gaggaattg cagaagtggc tgctgaatta aaccctgatg gttctgcca gcagcaatca 480
 aaagccgtta acaaagtga aaagaaagct aaaaggattc ttcaagaaat ggttgccact 540
 gtctcaccgg caatgatcag actgactggg tgggtgctgc taaaactgtt caacagcttc 600

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ttcattctct tctgccataa catcaaagca ccatacattg cttcaggcaa taatctcaac 780
atcccaatct tcagtacctt gatccataag cttgggggct tcttcatacg acgaaggctc 840
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gttgaattac ttcgacagca gcaattcttg gagatcttcc tgggaaggcac acgttctagg 960
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<210> 4

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> HMM database acyltransferase domain

<400> 4

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<210> 5

<211> 179

<212> PRT

<213> Artificial Sequence

<220>

<223> Prodom database acyltransferase protein

<400> 5

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Phe Ile Gln Tyr Gly Ile Leu Thr Val Ala Glu Gln Asp Asp Gln Glu
 1           5           10           15
Asp Val Ser Pro Gly Leu Ala Glu Gln Gln Trp Asn Lys Lys Leu Pro
           20           25           30
Glu Pro Leu Asn Trp Arg Ser Asp Glu Glu Asp Glu Asp Ser Asp Phe
           35           40           45
Gly Glu Glu Gln Arg Asp Cys Tyr Leu Lys Val Ser Gln Ala Lys Glu

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      50      55      60
His Gln Gln Phe Ile Thr Phe Leu Gln Arg Leu Leu Gly Pro Leu Leu
65      70      75      80
Glu Ala Tyr Ser Ser Ala Ala Ile Phe Val His Asn Phe Arg Gly Pro
      85      90      95
Val Pro Glu Ser Glu Tyr Leu Gln Lys Leu His Arg Tyr Leu Ile Thr
      100      105      110
Arg Thr Glu Arg Asn Val Ala Val Tyr Ala Glu Ser Ala Thr Tyr Cys
      115      120      125
Leu Val Lys Asn Ala Val Lys Met Phe Lys Asp Ile Gly Val Phe Lys
      130      135      140
Glu Thr Lys Gln Lys Arg Ala Ser Val Leu Glu Leu Ser Thr Thr Phe
145      150      155      160
Leu Pro Gln Cys Asn Arg Gln Lys Leu Leu Glu Tyr Ile Leu Ser Phe
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Val Val Leu

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<210> 6
 <211> 97
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Prodom database acyltransferase protein

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<400> 6
Met Ser Arg Lys Arg Pro Phe Val Gly Arg Cys Cys Tyr Ser Cys Thr
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Pro Gln Ser Trp Glu Arg Phe Phe Asn Pro Ser Ile Pro Ser Leu Gly
      20      25      30
Leu Arg Asn Val Ile Tyr Ile Asn Glu Thr His Thr Arg His Arg Gly
      35      40      45
Trp Leu Ala Arg Arg Leu Ser Tyr Ile Leu Phe Val Gln Glu Arg Asp
      50      55      60
Val His Lys Gly Met Phe Ala Thr Ser Ile Thr Asp Asn Val Leu Asn
65      70      75      80
Ser Ser Arg Val Gln Glu Ala Ile Ala Glu Val Ala Ala Glu Leu Asn
      85      90      95
Pro

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<210> 7
 <211> 192
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Prodom database acyltransferase protein

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<400> 7
Arg Asn Leu Ile Arg Ser Ile Gly Glu His Val Val Phe Asp Cys Ser
 1      5      10      15
Met Met Cys Ser Ile Met Ser Thr His Val Val Ala Cys Leu Leu Leu
      20      25      30
Thr Arg Trp Arg Asn Gly Val His Arg Ser Thr Leu Glu Glu Asp Cys
      35      40      45
Asp Trp Leu Cys Glu Lys Ile Leu Ala Glu Gly Gly Asp Ile Val Gly
      50      55      60
Phe Ser Gly Lys Ser Thr Lys Gly Ser Gln Ile Val Lys Tyr Ala Cys
65      70      75      80
Glu Leu Leu Gly Ser Cys Val Thr Val Thr Asp Glu Asp Arg Asn Asp

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				85					90					95			
Glu	Phe	Tyr	Ile	Ser	Pro	Lys	Asn	Ser	Val	Pro	Ser	Phe	Ile	Glu	Leu		
			100					105					110				
Ala	Tyr	Tyr	Ser	Asn	Ser	Val	Ile	Cys	His	Phe	Ala	Leu	Lys	Ser	Ile		
		115					120					125					
Ile	Ala	Cys	Thr	Ile	Tyr	Ser	Leu	Pro	Asn	Lys	Thr	Lys	Asn	Gly	Gly		
	130					135					140						
Glu	Ala	Gly	Gly	Leu	Gly	Asn	Leu	Ile	Ser	Gln	Glu	Gln	Leu	Val	Glu		
145					150					155					160		
Asp	Ala	Leu	Ser	Leu	Cys	Asp	Trp	Leu	Gln	Tyr	Glu	Phe	Met	Phe	Cys		
			165					170						175			
Arg	Pro	Cys	Gln	Thr	Leu	Arg	Glu	Leu	Cys	His	Asn	Thr	Leu	Gly	Lys		
			180					185					190				

<210> 8
 <211> 152
 <212> PRT
 <213> Artificial Sequence

<220>
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Leu	Ser	Met	Pro	Ile	Met	Gly	Ser	Leu	Leu	Arg	Arg	Thr	Gly	Ala	Phe		
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Phe	Ile	Arg	Arg	Ser	Phe	Asp	Pro	Thr	Pro	Glu	Gly	Lys	Gly	Asp	Gln		
			20				25					30					
Leu	Tyr	Arg	Ala	Val	Phe	His	Glu	Tyr	Val	Ala	Gln	Leu	Ile	Ser	Lys		
		35				40					45						
Gly	Tyr	Asn	Ile	Glu	Phe	Phe	Ile	Glu	Gly	Thr	Arg	Ser	Arg	Thr	Gly		
	50				55					60							
Lys	Met	Leu	Pro	Pro	Lys	Thr	Gly	Leu	Leu	Ser	Met	Val	Val	Glu	Ala		
65				70				75							80		
Phe	Leu	Arg	Gly	Ser	Val	Pro	Asp	Ile	Leu	Leu	Val	Pro	Val	Ser	Ile		
				85				90						95			
Ser	Tyr	Asp	Arg	Ile	Ile	Glu	Gly	Asn	Thr	Tyr	Ala	His	Glu	Leu	Arg		
			100					105					110				
Gly	Ala	Pro	Lys	Lys	Lys	Glu	Ser	Leu	Trp	Gln	Leu	Phe	Arg	Gly	Val		
		115				120						125					
Arg	Lys	Met	Leu	Lys	Arg	Asn	Tyr	Gly	Gln	Val	Tyr	Val	Asp	Phe	Gly		
	130					135					140						
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145					150												

<210> 9
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 <212> PRT
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<220>
 <223> Prodom database acyltransferase protein

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Ser	Phe	Glu	Val	Ala	Trp	Arg	Ile	Leu	Gln	Ala	Thr	Pro	Val	Thr	Ala		
			20				25					30					
Thr	Gly	Leu	Val	Ser	Ala	Leu	Leu	Leu	Thr	Thr	Arg	Gly	Thr	Ala	Leu		
		35				40					45						
Thr	Leu	Asp	Gln	Leu	His	His	Thr	Leu	Gln	Asp	Ser	Leu	Asp	Tyr	Leu		
	50				55					60							
Glu	Arg	Lys	Gln	Ser	Pro	Val	Ser	Thr	Ser	Ala	Leu	Arg	Leu	Arg	Ser		

65		70		75		80									
Arg	Glu	Gly	Val	Arg	Ala	Ala	Ala	Asp	Ala	Leu	Ser	Asn	Gly	His	Pro
				85					90					95	
Val	Thr	Arg	Val	Asp	Ser	Gly	Arg	Glu	Pro	Val	Trp	Tyr	Ile	Ala	Pro
			100					105					110		
Asp	Asp	Glu	His	Ala	Ala	Ala	Phe	Tyr	Arg	Asn	Ser	Val	Ile	His	Ala
		115					120					125			
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	130					135									

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 <212> PRT
 <213> Artificial Sequence

<220>
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20 25 30
Glu Ala Arg Glu Ile Leu Asp Glu Met Ser His Thr Leu Asn Met Gly
35 40 45
Met Ile Arg Phe Cys Gly Trp Val Leu Ser Lys Ile Phe Asn Arg Ile
50 55 60
Phe Ser Gly Ile Cys Val Asn Glu Glu Gln Ile Glu Lys Ile Lys Arg
65 70 75 80
Ala Thr Glu Gln Gly His Pro Val Ile Tyr Leu Pro Ser His Arg Ser
85 90 95
His Ile Asp Tyr Leu Leu Leu Ser Phe Ile Leu Tyr His Tyr Asp Ile
100 105 110
Lys Val Pro His Ile Ala Ala Gly Met Asn Leu
115 120

<210> 11
 <211> 55
 <212> PRT
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<220>
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<400> 11
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1 5 10 15
Pro Asn Ser Ser Glu Tyr Ser Leu Gly Arg Cys Lys His Thr Asn Glu
20 25 30
Asp Trp Val Asp Cys Gly Phe Lys Pro Thr Phe Phe Arg Ser Ala Thr
35 40 45
Leu Lys Trp Lys Glu Ser Leu
50 55

<210> 12
 <211> 123
 <212> PRT
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<220>
 <223> Prodom database acyltransferase protein

<400> 12
Val Asn His Leu Ala Lys Gln Ile Met Thr His Ile Asn Asp Ala Ala
1 5 10 15
Ala Val Asn Pro Met Asn Leu Cys Ala Thr Ala Leu Leu Ser Thr Arg
20 25 30
Gln Arg Ala Leu Gly Glu Glu Gln Leu Ile Glu Gln Leu Asp Cys Tyr
35 40 45
Leu Lys Leu Leu Arg Asn Val Pro Tyr Ser Thr Asp Ala Thr Leu Pro
50 55 60
Asp His Thr Pro Glu Arg Leu Ile Glu His Ala Glu Gln Met Asn Leu
65 70 75 80
Leu Gly Val Thr Val Glu Lys Asp Thr Leu Gly Asp Ile Leu Arg Leu
85 90 95
Asp Arg Asp Asn Ala Val Leu Met Thr Tyr Tyr Arg Asn Asn Val Leu
100 105 110
His Leu Phe Ala Leu Pro Ala Leu Val Ala Cys
115 120

<210> 13
<211> 91
<212> PRT
<213> Artificial Sequence

<220>
<223> Prodom database acyltransferase protein

<400> 13
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Leu Val Ala Cys Phe Lys Asn Asn Arg Arg Ile Ser Arg Asp Ala
20 25 30
Leu Leu Arg Phe Val Arg Ala Leu Tyr Pro Phe Leu Gln Ala Glu Leu
35 40 45
Phe Leu Arg Trp Asn Glu Asp Glu Leu Asn Asp His Ile Asp Gln Trp
50 55 60
Ile Asn Glu Phe Val Arg Gln Gly Leu Leu Leu Ser Ala Gly Asn Gln
65 70 75 80
Glu Asp Asp Thr Leu Thr Arg Asn Thr Ser Gln
85 90

<210> 14
<211> 110
<212> PRT
<213> Artificial Sequence

<220>
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Arg Cys Cys Pro Leu Gln Asn Gln Lys Asp Ile Pro Ser Ile Leu Gln
20 25 30
Glu Leu Thr Gln Asn Asn Lys Ser Val Ser Lys Ala Ser His Met His
35 40 45
Met Tyr Ala Trp Arg Thr Ala Glu Val Ser Asn Asn Leu His Leu Gln
50 55 60
Gln Glu Gln Lys Lys Lys Gly Asn Lys Ala Asn Lys Ser Asn Asn Ser
65 70 75 80
His Val Asn Lys Ser Arg Asn Ile Thr Val Gln Pro Lys Asn Ile Glu
85 90 95

Gln Gly Cys Ala Asp Cys Gly Glu Ala Gly Ala Gly Gln Arg
100 105 110

<210> 15
<211> 827
<212> PRT
<213> Mus musculus

<220>
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20 25 30
Asp Trp Val Asp Cys Gly Phe Lys Pro Thr Phe Phe Arg Ser Ala Thr
35 40 45
Leu Lys Trp Lys Glu Ser Leu Met Ser Arg Lys Arg Pro Phe Val Gly
50 55 60
Arg Cys Cys Tyr Ser Cys Thr Pro Gln Ser Trp Glu Arg Phe Phe Asn
65 70 75 80
Pro Ser Ile Pro Ser Leu Gly Leu Arg Asn Val Ile Tyr Ile Asn Glu
85 90 95
Thr His Thr Arg His Arg Gly Trp Leu Ala Arg Arg Leu Ser Tyr Ile
100 105 110
Leu Phe Val Gln Glu Arg Asp Val His Lys Gly Met Phe Ala Thr Ser
115 120 125
Val Thr Glu Asn Val Leu Ser Ser Ser Arg Val Gln Glu Ala Ile Ala
130 135 140
Glu Val Ala Ala Glu Leu Asn Pro Asp Gly Ser Ala Gln Gln Gln Ser
145 150 155 160
Lys Ala Ile Gln Lys Val Lys Arg Lys Ala Arg Lys Ile Leu Gln Glu
165 170 175
Met Val Ala Thr Val Ser Pro Gly Met Ile Arg Leu Thr Gly Trp Val
180 185 190
Leu Leu Lys Leu Phe Asn Ser Phe Phe Trp Asn Ile Gln Ile His Lys
195 200 205
Gly Gln Leu Glu Met Val Lys Ala Ala Thr Glu Thr Asn Leu Pro Leu
210 215 220
Leu Phe Leu Pro Val His Arg Ser His Ile Asp Tyr Leu Leu Leu Thr
225 230 235 240
Phe Ile Leu Phe Cys His Asn Ile Lys Ala Pro Tyr Ile Ala Ser Gly
245 250 255
Asn Asn Leu Asn Ile Pro Val Phe Ser Thr Leu Ile His Lys Leu Gly
260 265 270
Gly Phe Phe Ile Arg Arg Arg Leu Asp Glu Thr Pro Asp Gly Arg Lys
275 280 285
Asp Ile Leu Tyr Arg Ala Leu Leu His Gly His Val Val Glu Leu Leu
290 295 300
Arg Gln Gln Gln Phe Leu Glu Ile Phe Leu Glu Gly Thr Arg Ser Arg
305 310 315 320
Ser Gly Lys Thr Ser Cys Ala Arg Ala Gly Val Leu Ser Val Val Val
325 330 335
Asn Thr Leu Ser Ser Asn Thr Ile Pro Asp Ile Leu Val Ile Pro Val
340 345 350
Gly Ile Ser Tyr Asp Arg Ile Ile Glu Gly His Tyr Asn Gly Glu Gln
355 360 365
Leu Gly Lys Pro Lys Lys Asn Glu Ser Leu Trp Ser Val Ala Arg Gly
370 375 380
Val Ile Arg Met Leu Arg Lys Asn Tyr Gly Tyr Val Arg Val Asp Phe
385 390 395 400
Ala Gln Pro Phe Ser Leu Lys Glu Tyr Leu Glu Gly Gln Ser Gln Lys

Pro	Val	Ser	Ala	405	Pro	Leu	Ser	Leu	Glu	410	Gln	Ala	Leu	Leu	Pro	415	Ala	Ile
			420		Pro	Asn	Asp	Val	425	Ala	Asp	Glu	His	Gln	430	Asp	Leu	Ser
Leu	Pro	Ser	Arg	435				440						445				
Ile	Asn	Glu	Ser	Arg	Asn	Pro	Ala	Asp	Glu	Ala	Phe	Arg	Arg	Arg	Arg	Leu		
	450				455					460								
Ile	Ala	Asn	Leu	Ala	Glu	His	Ile	Leu	Phe	Thr	Ala	Ser	Lys	Ser	Cys			
465					470					475					480			
Ala	Ile	Met	Ser	Thr	His	Ile	Val	Ala	Cys	Leu	Leu	Leu	Tyr	Arg	His			
				485					490						495			
Arg	Gln	Gly	Ile	His	Leu	Ser	Thr	Leu	Val	Glu	Asp	Phe	Phe	Val	Met			
			500					505						510				
Lys	Glu	Glu	Val	Leu	Ala	Arg	Asp	Phe	Asp	Leu	Gly	Phe	Ser	Gly	Asn			
		515					520						525					
Ser	Glu	Asp	Val	Val	Met	His	Ala	Ile	Gln	Leu	Leu	Gly	Asn	Cys	Val			
	530				535					540								
Thr	Ile	Thr	His	Thr	Ser	Arg	Lys	Asp	Glu	Phe	Phe	Ile	Thr	Pro	Ser			
545					550					555					560			
Thr	Thr	Val	Pro	Ser	Val	Phe	Glu	Leu	Asn	Phe	Tyr	Ser	Asn	Gly	Val			
				565					570					575				
Leu	His	Val	Phe	Ile	Met	Glu	Ala	Ile	Ile	Ala	Cys	Ser	Leu	Tyr	Ala			
			580					585						590				
Val	Leu	Asn	Lys	Arg	Cys	Ser	Gly	Gly	Pro	Thr	Ser	Thr	Pro	Pro	Asn			
	595						600						605					
Leu	Ile	Ser	Gln	Glu	Gln	Leu	Val	Arg	Lys	Ala	Ala	Ser	Leu	Cys	Tyr			
	610					615												
Leu	Leu	Ser	Asn	Glu	Gly	Thr	Ile	Ser	Leu	Pro	Cys	Gln	Thr	Phe	Tyr			
625					630					635					640			
Gln	Val	Cys	His	Glu	Thr	Val	Gly	Lys	Phe	Ile	Gln	Tyr	Gly	Ile	Leu			
				645					650					655				
Thr	Val	Ala	Glu	Gln	Asp	Asp	Gln	Glu	Asp	Val	Ser	Pro	Gly	Leu	Ala			
			660					665						670				
Glu	Gln	Gln	Trp	Asp	Lys	Lys	Leu	Pro	Glu	Leu	Asn	Trp	Arg	Ser	Asp			
		675					680					685						
Glu	Glu	Asp	Glu	Asp	Ser	Asp	Phe	Gly	Glu	Glu	Gln	Arg	Asp	Cys	Tyr			
	690				695					700								
Leu	Lys	Val	Ser	Gln	Ser	Lys	Glu	His	Gln	Gln	Phe	Ile	Thr	Phe	Leu			
705					710					715					720			
Gln	Arg	Leu	Leu	Gly	Pro	Leu	Leu	Glu	Ala	Tyr	Ser	Ser	Ala	Ala	Ile			
				725					730					735				
Phe	Val	His	Asn	Phe	Ser	Gly	Pro	Val	Pro	Glu	Pro	Glu	Tyr	Leu	Gln			
			740				745						750					
Arg	Leu	His	Lys	Tyr	Leu	Ile	Thr	Arg	Thr	Glu	Arg	Asn	Val	Ala	Val			
			755				760					765						
Tyr	Ala	Glu	Ser	Ala	Thr	Tyr	Cys	Leu	Val	Lys	Asn	Ala	Val	Lys	Met			
	770				775					780								
Phe	Lys	Asp	Ile	Gly	Val	Phe	Lys	Glu	Thr	Lys	Gln	Lys	Arg	Val	Ser			
785					790					795					800			
Val	Leu	Glu	Leu	Ser	Thr	Phe	Leu	Pro	Gln	Cys	Asn	Arg	Gln	Lys				
			805					810					815					
Leu	Leu	Glu	Tyr	Ile	Leu	Ser	Phe	Val	Val	Leu								
			820					825										

<210> 16
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 <212> PRT
 <213> Rattus norvegicus

<400> 16
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 Pro Asn Ser Ser Glu Tyr Ser Leu Gly Arg Cys Lys His Thr Asn Glu

530	Thr	Ile	Thr	His	Thr	Ser	Arg	Lys	Asp	Glu	Phe	540	Phe	Ile	Thr	Pro	Ser
545	Thr	Thr	Val	Pro	Ser	Val	Phe	Glu	Leu	Asn	Phe	555	Tyr	Ser	Asn	Gly	Val
					565							570					575
Leu	His	Val	Phe	Ile	Met	Glu	Ala	Ile	Ile	Ala	Cys	Ser	Leu	Tyr	Ala		
			580					585					590				
Val	Gln	Asn	Lys	Arg	Gly	Ser	Gly	Gly	Pro	Thr	Ser	Thr	Pro	Pro	Asn		
		595					600					605					
Leu	Ile	Ser	Gln	Glu	Gln	Leu	Val	Arg	Lys	Ala	Ala	Ser	Leu	Cys	Tyr		
	610					615					620						
Leu	Leu	Ser	Asn	Glu	Gly	Thr	Ile	Ser	Leu	Pro	Cys	Gln	Thr	Phe	Tyr		
625					630					635					640		
Gln	Val	Cys	Gln	Glu	Thr	Val	Gly	Lys	Phe	Ile	Gln	Tyr	Gly	Ile	Leu		
			645						650					655			
Thr	Val	Ala	Glu	Gln	Asp	Asp	Gln	Glu	Asp	Val	Ser	Pro	Gly	Leu	Ala		
		660						665					670				
Glu	Gln	Gln	Trp	Asn	Lys	Lys	Leu	Pro	Glu	Pro	Leu	Asn	Trp	Arg	Ser		
	675					680					685						
Asp	Glu	Glu	Asp	Glu	Asp	Ser	Asp	Phe	Gly	Glu	Glu	Gln	Arg	Asp	Cys		
	690					695					700						
Tyr	Leu	Lys	Val	Ser	Gln	Ala	Lys	Glu	His	Gln	Gln	Phe	Ile	Thr	Phe		
705					710					715					720		
Leu	Gln	Arg	Leu	Leu	Gly	Pro	Leu	Leu	Glu	Ala	Tyr	Ser	Ser	Ala	Ala		
			725						730					735			
Ile	Phe	Val	His	Thr	Phe	Arg	Gly	Pro	Val	Pro	Glu	Pro	Glu	Tyr	Leu		
		740							745				750				
Gln	Arg	Leu	His	Lys	Tyr	Leu	Ile	Thr	Arg	Thr	Glu	Arg	Asn	Val	Ala		
	755					760					765						
Val	Tyr	Ala	Glu	Ser	Ala	Thr	Tyr	Cys	Leu	Val	Lys	Asn	Ala	Val	Lys		
	770				775					780							
Met	Phe	Lys	Asp	Ile	Gly	Val	Phe	Lys	Glu	Thr	Lys	Gln	Lys	Arg	Ala		
785					790					795					800		
Ser	Val	Leu	Glu	Leu	Ser	Ser	Thr	Phe	Leu	Pro	Gln	Cys	Asn	Arg	Gln		
			805						810					815			
Lys	Leu	Leu	Glu	Tyr	Ile	Leu	Ser	Phe	Val	Val	Leu						
			820					825									